

Test Security



JASON KOLB – TEST SECURITY COORDINATOR, OSA
PAUL M. STEMMER, JR. – COORDINATOR, NATIONAL
ASSESSMENT OF EDUCATIONAL PROGRESS

Session Overview



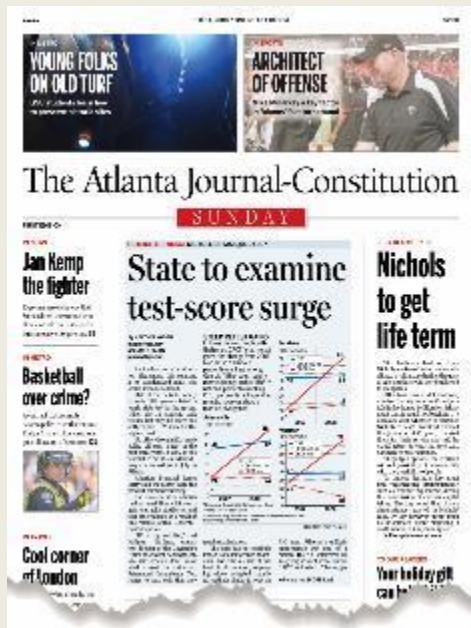
- UNDERSTANDING THE IMPORTANCE OF TEST SECURITY
- COMMON TEST SECURITY ISSUES
- HOW OSA DETECTS SECURITY ISSUES
- HOW OSA REACTS TO ISSUES
- DETERMINATIONS AND CONSEQUENCES
- EASY WAYS TO STAY OUT OF TROUBLE
- OPEN DISCUSSION

Why is Test Security So Important?



- To ensure that assessment results are accurate and meaningful
- To truly reflect a valid and reliable measure of each student's knowledge
- To protect the enormous investments of resources, time, and energy that go into assessments
- Disregarding test security can lead to investigations, invalidations, or in extreme circumstances, even jail!

An Infamous Test Security Case...



The Atlanta Cheating Scandal



- District-wide falsification of answer sheets by teachers and administrators
- Discovered after newspaper reported unusual jump in test scores on the Criterion-Referenced Competency Tests (CRCT)
- Investigation uncovered rampant, widespread cheating
- 30+ Atlanta school employees charged under RICO (Racketeer Influenced and Corrupt Organizations) statute for conspiring in order to receive bonuses tied to high test scores





Common Test Security Issues



BEFORE, DURING, AND AFTER	Paper/Pencil	Computer-Based Testing
Lost or stolen booklets	*	
Obtaining unauthorized access to secure assessment materials	*	*
Educators logging into tests to view questions or change responses		*
Hacking into computers		*
BEFORE	P/P	CBT
Educators or students engaging others to take a test on a student's behalf	*	*
DURING	P/P	CBT
Students giving or receiving unauthorized assistance from other students during a test administration	*	*
Teachers providing answers to students during testing	*	*
Students accessing non-allowable resources (notes, textbooks, the Internet)	*	*
Taking photos of test items or live testing environment and sharing them on the Internet or Social Media	*	*
Accommodations being used inappropriately to cheat	*	*
Keystroke logging		*
AFTER	P/P	CBT
Erasing wrong answers (P/P) or changing responses on the computer (CBT)	*	*
Reconstructing assessment materials through memorization	*	*
Memorized test items or answers being posted online	*	*
Printing, emailing, or storing test information in a computer outside the test delivery system		*
Accessing or altering assessment materials or scores during the transfer of data	*	*

A Brief Digression about Security and Social Media



- Pictures of, and/or discussion about test items on social media steadily on the rise
- No age barrier
- Not limited to just students
-  Twitter wins the “Social Media Incident Award” for 2015 – 72% of Michigan’s social media incidents
-  Instagram the “runner up” – 12% of incidents
-   Facebook and Snapchat get “honorable mention”

How MDE Detects Test Security Issues



Incident/Irregularity Reports

- Link provided before testing for schools/districts to self-report issue(s)

Unethical Line

- Public-facing phone number where anyone can report an issue
- Typically anonymous calls

How MDE Detects Test Security Issues



In-person Monitoring

- Random Monitoring - Schools are randomly chosen for unannounced visits during testing
- Targeted Monitoring- Unannounced visits to schools with security issues in prior test administrations

Social Media Monitoring

- OSA contractors use “web patrol” software to monitor for test security breaches, e.g., photos of items, photos of classrooms testing, discussion of specific live test items

Dispelling the Myths about Social Media Monitoring



- OSA is ONLY looking for security breaches
- OSA is not:
 - searching for and asking users to remove negative opinions about testing
 - invading privacy - only looking at public-facing sites

How MDE Detects Test Security Issues



Telemetry Reports

- Every action/keystroke is logged during online testing
- Reports can tell us login attempts, login times, unusual patterns

Post-Test Forensic Analysis

- Unusual Scores Gains – extreme group/cohort gains
- Similarity Analysis – analyzing items responses for unusual similarity
- Corrective Change Analysis – incorrect to correct responses
- Person Fit Analysis – student(s) responding in unexpected ways

Telemetry Report Example



Barcode	Content Area	Grade Tested	Assessment Name	Test Part	Lithocode	Test Event ID	Start Date	Start Time	End Date	End Time	Last Name	First Name	Username	Password	Telemetry Findings
xxxxxxxxxx	ELA	07	G 7 ELA Performance Task	2	99000899774	3569993	2015-05-02	07:32:33.777	2015-05-02	07:44:06.000	xxxxxx	xxxxxx	xxxxxx	XQ5NFBV2V	8997742 122037.2 CMSMSTEP10 TSM TEST 1 1 of 1 questions answered 5/2/15 6:44 AM 2 Abnormal exits
xxxxxxxxxx	ELA	07	G 7 ELA Performance Task	2	99000899774	3569993	2015-05-02	07:40:52.433	2015-05-02	07:44:06.000	xxxxxx	xxxxxx	xxxxxx	XQ5NFBV2V	8997742 122037.2 -1Pq6dc1C TSM TEST 1 1 of 1 questions answered 5/2/15 6:44 AM Chromebook
xxxxxxxxxx	ELA	07	G 7 ELA Performance Task	1	99000892943	3778877	2015-05-02	07:43:05.540	2015-05-02	08:44:27.440	xxxxxx	xxxxxx	xxxxxx	D8P7BJLJ	8929434 121870.1 W10KL5q10 TSM TEST 1 2 of 2 questions answered 5/2/15 7:44 AM

How OSA Reacts to Test Security Issues – Self Investigations



- Following a reported incident or complaint, OSA may determine that questions remain and will ask the district to investigate issue and submit formal report and signed statements, with a detailed chain of events and steps taken to remediate issue.
- Thorough self-reports often eliminate the need for OSA to take serious action.

How MDE Reacts to Test Security Issues – Independent Investigations



- Following a reported incident, complaint, or insufficient self-investigation report, OSA may launch a formal investigation using independent investigators.
- Investigation teams will arrive unannounced, they may request copies of staff communications and interview staff and/or students.
- The role of investigators is strictly to identify any relevant facts and send report to OSA.
- Independent investigation teams are typically a mix of law-enforcement (e.g., detectives) and education assessment professionals (e.g., ex-assessment coordinators).

Determinations



After reviewing all information and evidence, OSA makes one of the following determinations:

- There was no irregularity and the case is closed.
- A self-correction was completed – OSA determines that the school properly resolved the issue and the case is closed.
- The irregularity led to a breach in test security.
- The irregularity resulted in an invalid test administration.
- The irregularity resulted in academic fraud.

Consequences



If MDE finds an irregularity led to a **security breach**, possible consequences include:

- District liability for the cost of item re-development and re-administration (could encompass the entire state)
- Re-testing within the test cycle period (potential costs to the district)
- Invalidation of scores with no opportunity for re-testing
- Placement on OSA monitoring list for next year

Consequences (cont.)



If MDE finds an irregularity resulted in an **invalid administration**, possible consequences include:

- Re-testing within the test cycle period (potential cost to the district)
- Students in suspected grades and subjects are given an audit test — a parallel form of the test; scores between the two tests will be analyzed
- Invalidation of scores with no opportunity for re-testing
- Placement on monitoring list for next year
- School required to file a training plan with OSA
- School required to inform parents and local school board public of a misadministration and that scores will be invalidated

Consequences cont.



If MDE finds an irregularity resulted in **academic fraud**, possible consequences include:

- Re-testing within the test cycle period (potential costs to the district)
- Invalidation of scores with no opportunity for re-testing
- Placement on monitoring list for next year
- Test booklets or test tickets will be held in abeyance under the supervision of the state-appointed monitor and delivered on the day of testing. The Assessment Monitor will closely observe testing and collect and return answer documents or destroy test tickets
- Personnel involved in an irregularity may not be allowed to administer any state assessment
- District Superintendent will be notified so that the district may take necessary personnel actions
- School is required to file a training plan with OSA
- School is required to inform parents and local school board of a misadministration and that the student test scores will be invalid

Easy Ways to Stay out of Trouble



- Provide training for staff in appropriate test security, test preparation, test administration procedures, and accommodations.
- Supervise assessment materials closely – they should be secure at all times.
- Follow standardized test administration procedures and directions explicitly according to manuals.
- Closely monitor students and enforce a strict “no cell phone” policy.
- Document everything – chains of custody, seating charts, etc.
- If you see something, say something!
- Cooperate with OSA if something arises

Open Discussion



- Questions for us?
- Best practices you would like to share?
- We'd like your feedback on cell phone policies during testing:
 - What is your school's policy?
 - What are your best practices?

Contacts



- kolbj1@michigan.gov
- stemmerp@michigan.gov

Thank you!